

Date: Friday, 7/4/2008 8:46:57 AM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services			Drawing Name	: BRACKET ASSEMBLY		
Job Number	: 40251						
Estimate Number	: 10291						
P.O. Number	:			Part Number	: D3183044		
This Issue	: 7/4/2008	S.O. No.	:	Drawing Number	: D3183 REV C1		
Prsht Rev.	: NC			Project Number	: N/A		
First Issue	: / /	Type	: MACHINED PARTS	Drawing Revision	: C1		
Previous Run	: 40158			Material	:		
Written By	:			Due Date	: 7/30/2008	Qty:	6
Checked & Approved By	: <u>KJ</u> 08-07-04			Um:	Each		
Comment	: Est Rev: Pick:A 04.02.18 New issue KJ/DS						
	Est Rev:B Changed Mat Size 08-06-26 JLM			Verified By:EC			

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	M174B1500X02250	17-4 SS Bar 1.5"X2.250"
	Comment: Qty.: 0.4812 f(s)/Unit Total : 2.8873 f(s)	
	Material: 17-4 SS Bar per AMS 5604/5643	
	(M17-4-B1.500x02.250	
	Identify for D3183-4	
	Batch: <u>M108309</u> <u>DSP 08/07/11</u>	
2.0	BAND SAW	BAND SAW
	Comment: BAND SAW	
	Cut blanks: (1.500" x 2.000") 5.500" long	
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
	Comment: HAAS CNC VERTICAL MACHINING #1	
	1-Machine D3183-4 as per Folio FA322 and Dwg D3183	
	Identify as D3183-4	
	2-Deburr	
	3-Scribe batch number	
4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
	Comment: INSPECT PARTS AS THEY COME OFF MACHINE	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 7/4/2008 8:46:57 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 40251

Part Number: D3183044

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

J.L 08/07/23

6.0 D312121 Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
2 D3121-21	Bolt	<u>B39947</u>

08/07/28

7.0 D3183045 Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
2 D3183-045	Bearing Ass	<u>B40496</u>

08/07/28

8.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-043 as per Dwg D3183.

08/07/28 (6)

9.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/07/28 (6)

10.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

(6)

11.0 QC21 FINAL INSPECTION/W/O RELEASE



08/07/28 (6)

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-07-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	40251
Description: Bracket	Part Number:	D3183-4
Inspection Dwg: D3183 Rev: C1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	.187	/			
R0.063	+/-0.010	.063	/			
0.188	+/-0.010	.188	/			
0.070	+/-0.010	.073	/			
0.100	+/-0.010	.102	/			
Ø0.201 x 0.100	+/-0.010	.203 x .103	/			
0.183	+/-0.010	.185	/			
5.32	+/-0.030	5.320	/			
5.036	+/-0.010	5.076	/			
2.120	+/-0.010	2.122	/			
1.290	+/-0.010	1.292	/			
0.365	+/-0.010	.366	/			
0.218	+/-0.010	.219	/			
1.030	+/-0.010	1.030	/			
1.90	+/-0.030	1.890	/			
1.012	+/-0.010	1.017	/			
Ø0.201 x 0.100	+/-0.010	.201 x .101	/			
0.786	+/-0.010	.787	/			
Ø0.392	+0.002/-0.000	.383	/			
R0.19	+/-0.030	.190	/			
3.954	+/-0.010	3.954	/			
0.162	+/-0.010	.162	/			
R0.19	+/-0.030	.187	/			
R0.25	+/-0.030	.250	/			
4.26	+/-0.030	4.26	/			
2.800	+/-0.030	2.800	/			
Calculated dimension						
0.162	+/-0.010	0.162	/			
0.615	+/-0.010	.617	/			
0.435	+/-0.010	.435	/			
0.200	+/-0.010	.201	/			
0.381	+/-0.010	.382	/			
0.032	+/-0.010	.032	/			

Measured by:	S.P.	Audited by:	J.L.	Prototype Approval:	N/A
Date:	08/07/18	Date:	08/07/18	Date:	N/A

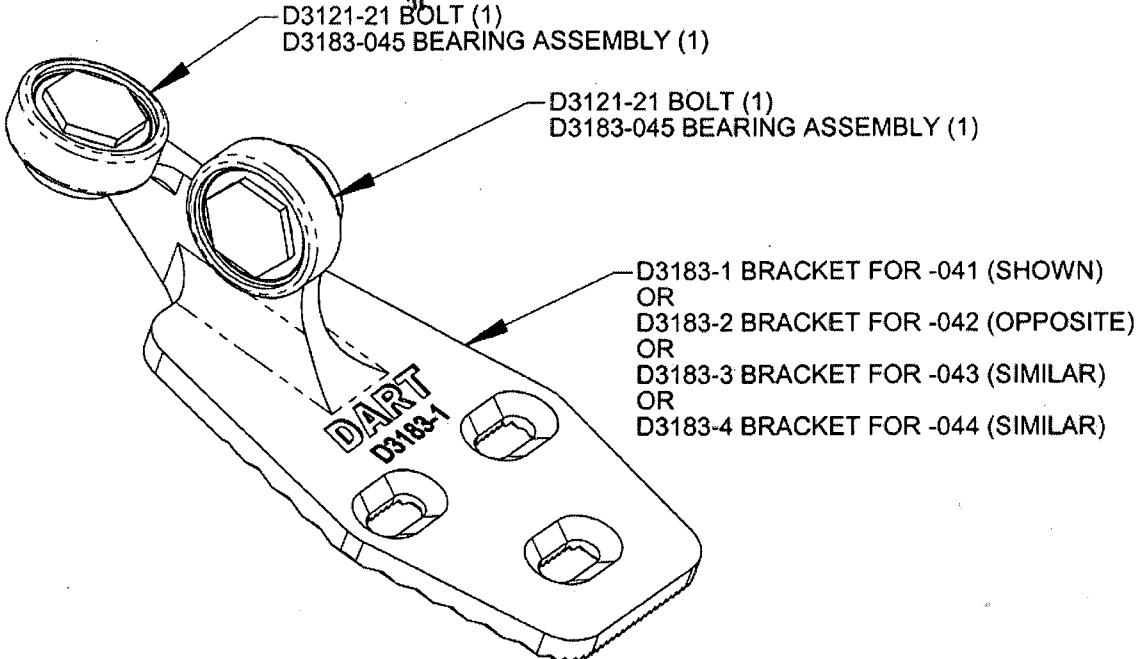
Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-044	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	04.06.15	Dimension 2.800 was 2.080; removed 1.155, 0.36 dimensions	KJ/JLM	
D	06.03.09	Dwg Rev update	KJ/JLM	
E	08.01.16	Dimensions revised	KJ/EC/DD	BB

DART

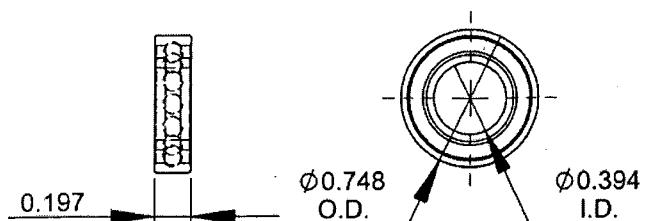
DESIGN <i>#</i>	DRAWN BY <i>IP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3183 REV. C SHEET 1 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY SCALE 1:1

RELEASED

04.03.01 off



D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)

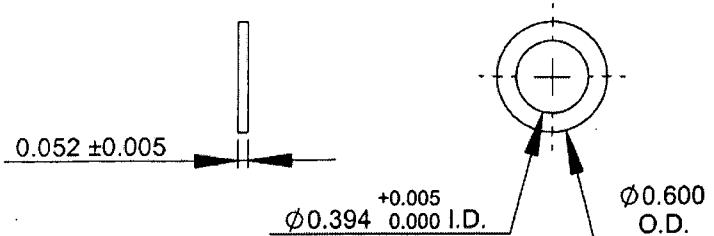


D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
40251



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R)
ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

COPYRIGHT © 2003 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

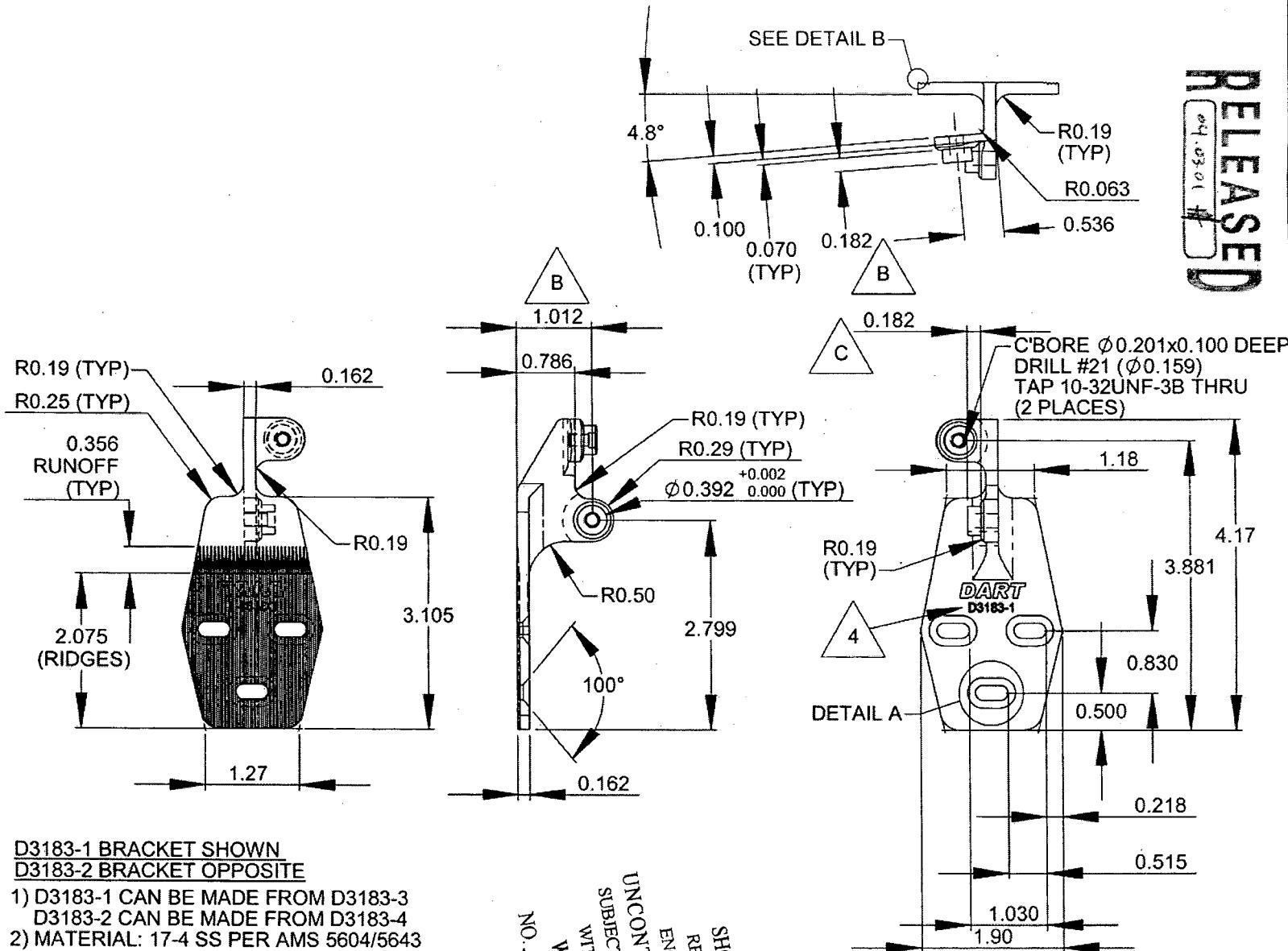
DART

DA CORPS
OCT 03 2001

DESIGN	DRAWN BY	DART AEROSPACE LTD
		HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3183
DATE	REV. C	SHEET 2 OF 4
04.02.17		1:2 SCALE
	TITLE	BRACKET ASSEMBLY

RELEASED

04.03.01



D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 4025

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DARTT AEROSPACE LTD.

COPYRIGHT © 2003 BY DART AEROSPACE LTD.

D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)

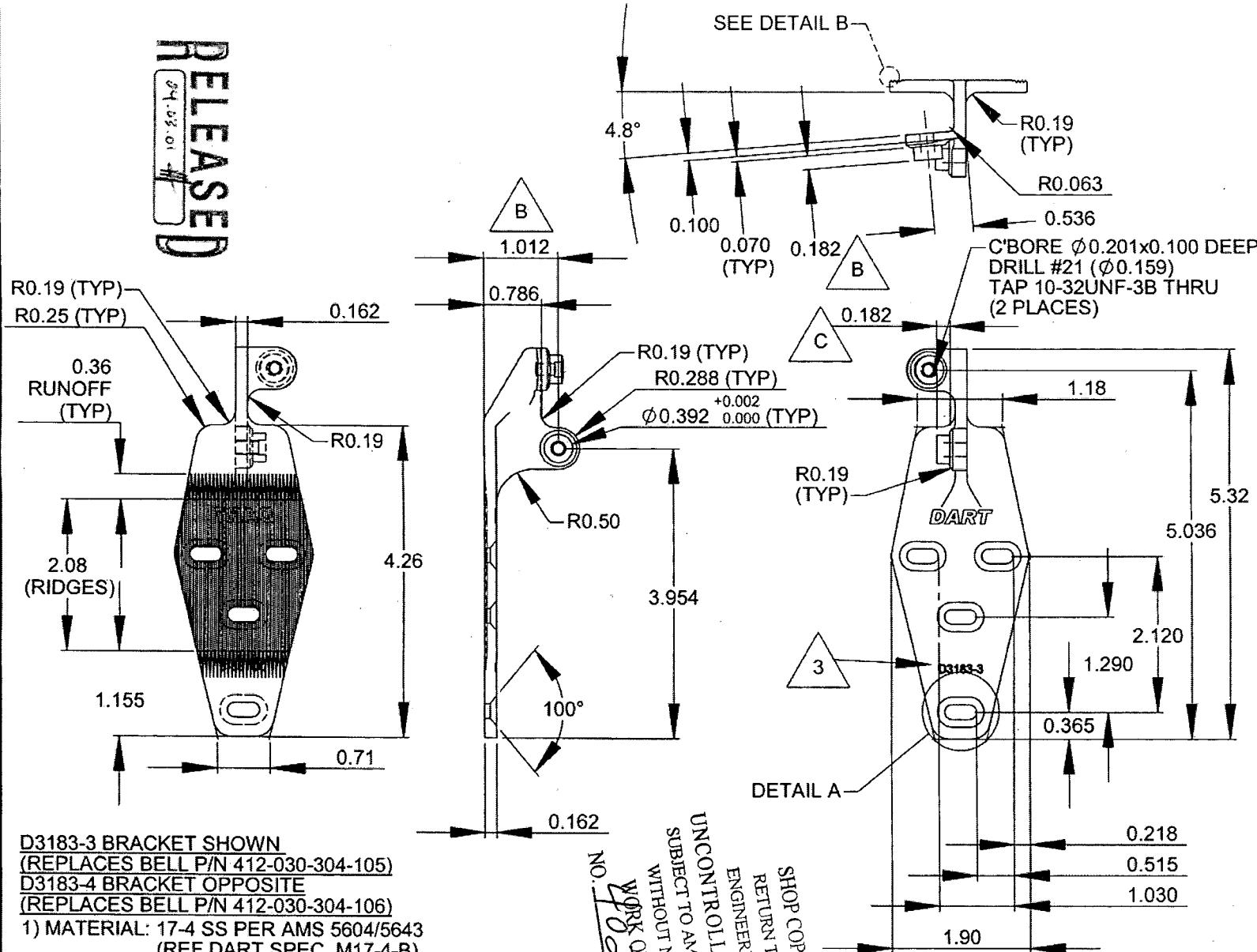
**D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)**

1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi

2) BREAK ALL SHARP EDGES 0.005 TO 0.015
3) ENGRAVE DART P/N & LOGO AS SHOWN

3) ENGRAVE DART P/N & LOGO AS SHOWN
4) TOLERANCES ARE PER PART GS1-8410 UNLESS OTHERWISE NOTED

4) TOLERANCES ARE PER DART QS
5) ALL DIMENSIONS ARE IN INCHES

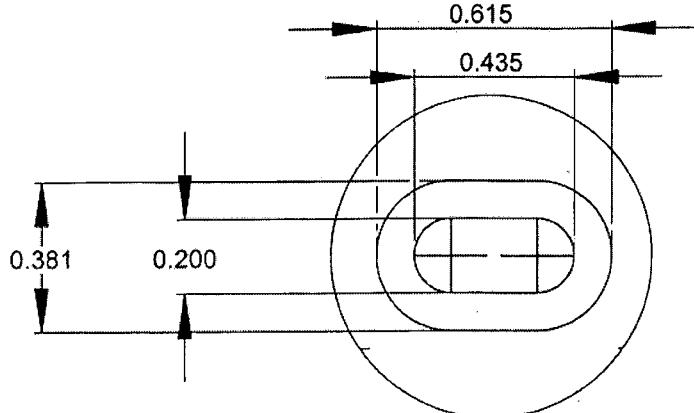


62 | **SHOP COPY**
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 10251

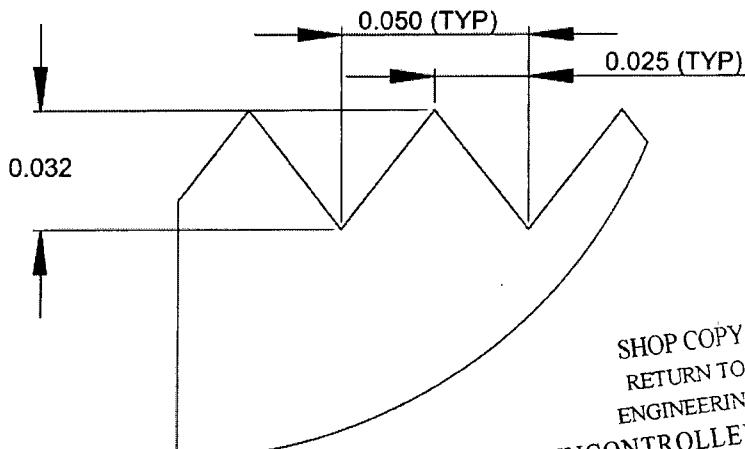
DESIGN		DRAWN BY <i>[Signature]</i>
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3183
DATE 04.02.17	TITLE BRACKET ASSEMBLY	REV. C SHEET 3 OF 4 SCALE 1:2
HAWKESBURY, ONTARIO, CANADA		

DART

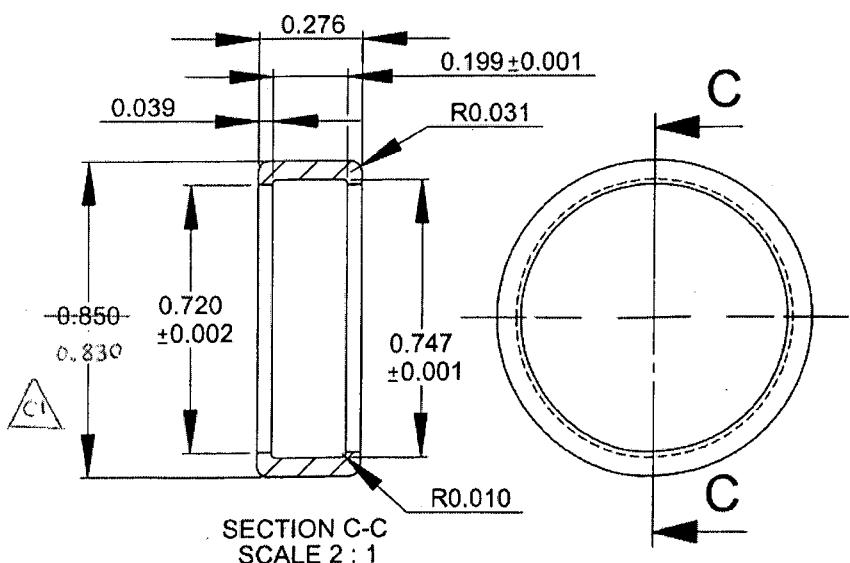
DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	DRAWING NO. D3183
DATE	04.02.17	REV. C SHEET 4 OF 4 TITLE BRACKET ASSEMBLY SCALE 1:1

**RELEASED**

04.03.01



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 40057

**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

COPYRIGHT © 2003 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.